

SUPPLEMENTARY INFORMATION

**Table S1.** Details of the 19 publications used to construct the dataset used in the current study. *Detalhes das 19 publicações usadas para compilar o conjunto de dados usado no presente estudo.*

Reference	Stream original name	Stream acronym	Nº of species	Temperature (°C)	pH	Conductivity (µS/cm)	N-NO <sub>3</sub> <sup>-</sup> (µg/L)	SRP (µg/L)	Latitude (°)	Longitude (°)	Altitude (m)	Substrate	Season
<b>Portugal</b>													
Pascoal <i>et al.</i> , 2003	L1	P1	18	13.1	6.6	48	1390.52	29.32	41.52095	-8.30345	128	<i>Alnus glutinosa</i>	autumn
	L2	P2	18	13.1	6.6	48	1623.02	32.57	41.48836	-8.33527	115	<i>Alnus glutinosa</i>	autumn
	L3	P3	18	13.1	6.8	193	2085.78	107.49	41.44497	-8.35474	113	<i>Alnus glutinosa</i>	autumn
	L5	P4	18	13.1	7.3	198	2582.39	198.70	41.37063	-8.41648	98	<i>Alnus glutinosa</i>	autumn
	L7	P5	22	13.1	7.1	318	3218.96	241.04	41.35389	-8.48327	45	<i>Alnus glutinosa</i>	autumn
Pascoal & Cássio, 2004	L1	P6	18	17.6	7.7	72	960.00	42.00	41.52095	-8.30345	128	<i>Alnus glutinosa</i>	spring/summer
	L2	P7	16	17.4	7.4	68	1242.00	29.00	41.48836	-8.33527	115	<i>Alnus glutinosa</i>	spring/summer
	L6	P8	14	20.3	7.1	286	2552.00	333.00	41.36278	-8.43743	75	<i>Alnus glutinosa</i>	spring/summer
	L7	P9	20	20.3	7.2	376	2645.00	408.00	41.35389	-8.48327	45	<i>Alnus glutinosa</i>	spring/summer
Pascoal <i>et al.</i> , 2005	S1	P10	37	10.6	6.0	42	497.00	3.00	41.57977	-8.33351	447	<i>Alnus glutinosa</i>	autumn/winter
	S2	P11	14	10.2	6.0	170	4968.00	176.00	41.51289	-8.45556	132	<i>Alnus glutinosa</i>	autumn/winter
Mesquita <i>et al.</i> , 2007	Este	P12	20	9.7	6.8	226	3390.00	480.00	41.51289	-8.45556	132	<i>Eucalyptus globulus</i>	autumn
	Guisande	P13	24	9.4	6.1	131	3950.00	120.00	41.48064	-8.45907	238	<i>Eucalyptus globulus</i>	autumn
Castela <i>et al.</i> , 2008	S1	P14	14	8.8	7.6	172	1311.51	5.85	40.31500	-8.38417	91	<i>Quercus robur</i>	winter
	S2	P15	16	8.9	7.5	172	1302.48	7.49	40.31278	-8.38694	82	<i>Quercus robur</i>	winter
	S3	P16	14	8.3	7.4	188	1404.06	16.23	40.30583	-8.39722	69	<i>Quercus robur</i>	winter
	S4	P17	13	10.7	7.3	201	1586.91	15.68	40.30056	-8.40056	62	<i>Quercus robur</i>	winter
Duarte <i>et al.</i> , 2008	Este1	P18	26	11.0	6.0	40	1600.00	60.00	41.57983	-8.33380	461	<i>Alnus glutinosa</i>	autumn/winter
	Este2	P19	6	12.4	7.1	195	4500.00	1300.00	41.52694	-8.43557	149	<i>Alnus glutinosa</i>	autumn/winter
Duarte <i>et al.</i> , 2009	Maceira	P20	21	9.0	7.0	14	300.00	20.00	41.76879	-8.14696	857	<i>Alnus glutinosa</i>	autumn/winter
	Este2	P21	28	13.0	6.7	44	900.00	20.00	41.58486	-8.35165	406	<i>Alnus glutinosa</i>	autumn/winter
	Algeriz	P22	24	13.0	7.1	42	600.00	40.00	41.59016	-8.37693	220	<i>Alnus glutinosa</i>	autumn/winter
	Este3	P23	13	13.0	7.0	161	5400.00	70.00	41.52690	-8.43569	148	<i>Alnus glutinosa</i>	autumn/winter
	Souto	P24	11	11.0	7.1	295	3300.00	60.00	41.52623	-8.28779	138	<i>Alnus glutinosa</i>	autumn/winter
Sridhar <i>et al.</i> , 2009	Souto	P25	17	13.2	6.0	51	2400.00	70.00	41.51921	-8.28688	174	<i>Alnus glutinosa</i>	spring
	Donim	P26	7	13.9	6.6	98	2400.00	600.00	41.52623	-8.28779	138	<i>Alnus glutinosa</i>	spring
Geraldes, 2011	Agra	P27	14	8.9	5.3	16	160.00	10.00	41.60979	-8.03883	776	mixed leaf species	autumn
	Oliveira	P28	23	11.6	6.6	39	770.00	10.00	41.58630	-8.22513	232	mixed leaf species	autumn
	Andorinhas	P29	23	12.1	6.6	59	1200.00	10.00	41.56979	-8.17704	210	mixed leaf species	autumn

Duarte <i>et al.</i> , 2015	Agrela	P30	24	12.7	6.6	97	3370.00	10.00	41.54175	-8.31950	269	mixed leaf species	autumn
	Selho	P31	21	12.9	6.9	154	3000.00	60.00	41.43809	-8.32253	149	mixed leaf species	autumn
	Costa	P32	29	13.9	6.7	182	1900.00	10.00	41.44827	-8.27634	218	mixed leaf species	autumn
	Couros	P33	4	14.6	7.2	324	3200.00	270.00	41.43741	-8.32175	149	mixed leaf species	autumn
	Agra	P34	7	8.4	6.5	16	64.00	5.21	41.60979	-8.03883	776	<i>Quercus robur</i>	autumn
	Oliveira	P35	15	10.4	7.0	39	520.00	11.07	41.58630	-8.22513	232	<i>Quercus robur</i>	autumn
	Andorinhas	P36	13	10.7	6.7	53	940.00	18.89	41.56979	-8.17704	210	<i>Quercus robur</i>	autumn
	Selho	P37	9	11.3	7.0	147	2240.00	88.60	41.43809	-8.32253	149	<i>Quercus robur</i>	autumn
Fernandes <i>et al.</i> , 2015	Couros	P38	2	12.6	7.1	268	1600.00	222.80	41.43741	-8.32175	149	<i>Quercus robur</i>	autumn
	Agra	P39	11	11.2	6.1	15	80.00	5.87	41.60979	-8.03883	776	<i>Quercus robur</i>	spring
	Oliveira	P40	21	13.0	6.8	33	287.50	10.44	41.58630	-8.22513	232	<i>Quercus robur</i>	spring
	Andorinhas	P41	28	13.8	6.7	50	1133.33	21.52	41.56979	-8.17704	210	<i>Quercus robur</i>	spring
	Selho	P42	22	15.2	7.0	119	2875.00	52.83	41.43809	-8.32253	149	<i>Quercus robur</i>	spring
	Couros	P43	15	15.7	7.2	242	3080.00	213.93	41.43741	-8.32175	149	<i>Quercus robur</i>	spring
<b>Spain</b>													
Casas <i>et al.</i> , 2011	Bayárcal	S1	19	6.8	7.3	44	245.00	9.00	37.06667	-3.01667	1720	<i>Alnus glutinosa</i>	autumn/winter
	Jérez	S2	17	8.9	6.8	59	135.00	22.00	37.16667	-3.16667	1280	<i>Alnus glutinosa</i>	autumn/winter
	Andarax	S3	14	9.4	8.0	181	60.00	13.00	37.01667	-2.16667	960	<i>Alnus glutinosa</i>	autumn/winter
	Aguas-M	S4	6	17.5	7.9	3477	165.00	13.00	37.08333	-2.06667	265	<i>Alnus glutinosa</i>	autumn/winter
	Aguas-P	S5	6	16.2	8.0	3500	52.00	9.00	37.08333	-2.05000	220	<i>Alnus glutinosa</i>	autumn/winter
	Jauto	S6	5	17.7	7.7	1395	122.00	9.00	37.15000	-2.00000	230	<i>Alnus glutinosa</i>	autumn/winter
	Vicar	S7	10	16.6	8.3	892	411.00	5.00	36.83333	-2.63333	280	<i>Alnus glutinosa</i>	autumn/winter
Pérez <i>et al.</i> , 2012	Ag1	S8	21	8.1	7.5	139	553.90	14.90	43.21000	-3.27000	345	<i>Alnus glutinosa</i>	autumn/winter
	AgB	S9	23	8.8	7.4	108	473.20	17.30	43.21000	-3.26000	370	<i>Alnus glutinosa</i>	autumn/winter
	AgC	S10	23	7.9	7.3	96	138.40	7.90	43.21000	-3.27000	330	<i>Alnus glutinosa</i>	autumn/winter
	Añ1	S11	23	9.1	7.2	75	146.50	13.00	43.23000	-1.89000	230	<i>Alnus glutinosa</i>	autumn/winter
	Añ2	S12	22	9.5	7.4	89	127.80	14.20	43.24000	-1.89000	230	<i>Alnus glutinosa</i>	autumn/winter
	Añ3	S13	23	9.2	7.3	76	162.10	18.40	43.24000	-1.88000	215	<i>Alnus glutinosa</i>	autumn/winter
	Al1	S14	21	7.9	8.0	228	170.90	16.00	43.00000	-2.88000	435	<i>Alnus glutinosa</i>	autumn/winter
	Al2	S15	17	7.3	8.0	184	64.50	17.80	43.00000	-2.88133	415	<i>Alnus glutinosa</i>	autumn/winter
	Al3	S16	18	8.2	7.7	214	79.10	17.70	43.01000	-2.90000	400	<i>Alnus glutinosa</i>	autumn/winter
	Martínez <i>et al.</i> , 2013	D1 alder	S17	12	8.0	7.1	134	600.10	14.40	43.20889	-3.27500	315	<i>Alnus glutinosa</i>
D2 alder		S18	12	7.2	7.5	171	33.10	16.90	42.99667	-2.87972	420	<i>Alnus glutinosa</i>	autumn/winter/spring
D3 alder		S19	11	7.7	7.6	120	35.30	15.80	42.99972	-2.88333	400	<i>Alnus glutinosa</i>	autumn/winter/spring
P1 alder		S20	11	8.3	7.0	77	596.10	14.00	43.09417	-2.89833	251	<i>Alnus glutinosa</i>	autumn/winter/spring
P2 alder		S21	16	7.8	7.2	156	282.00	15.70	43.94694	-2.99694	190	<i>Alnus glutinosa</i>	autumn/winter/spring
P3 alder		S22	17	8.5	7.2	112	257.40	14.60	43.09917	-2.92083	225	<i>Alnus glutinosa</i>	autumn/winter/spring
Menéndez <i>et al.</i> , 2013	Cánoves	S23	16	7.6	7.3	141	229.00	8.80	41.72056	2.34167	562	<i>Alnus glutinosa</i>	autumn
	Llobina	S24	13	6.9	7.5	235	462.00	23.40	41.54694	2.22917	446	<i>Alnus glutinosa</i>	autumn
	Avencó	S25	17	5.9	7.1	197	212.00	12.20	41.46222	2.16333	515	<i>Alnus glutinosa</i>	autumn
	Arbucies	S26	21	8.8	7.7	214	651.00	11.40	41.49389	2.27083	451	<i>Alnus glutinosa</i>	autumn
	Castanyet	S27	16	8.7	7.3	296	775.00	10.10	41.76283	2.26850	170	<i>Alnus glutinosa</i>	autumn
	Fuirosos	S28	14	7.7	7.0	263	1971.00	11.30	41.69667	2.57917	120	<i>Alnus glutinosa</i>	autumn

Pérez <i>et al.</i> , 2013	Katxanbiano-A	S29	16	7.5	7.6	130	150.00	16.00	42.99990	-2.88331	415	<i>Alnus glutinosa</i>	autumn
	Saldarian-B	S30	17	8.9	7.9	320	260.00	25.00	43.17020	-2.89064	100	<i>Alnus glutinosa</i>	autumn
	Olabarri-C	S31	19	8.2	8.2	270	390.00	29.00	43.11940	-2.90958	150	<i>Alnus glutinosa</i>	autumn
	Beraza-D	S32	23	8.3	7.7	140	690.00	28.00	43.10470	-2.90588	165	<i>Alnus glutinosa</i>	autumn
	Gorostika-E	S33	17	9.5	8.2	350	900.00	36.00	43.14800	-2.83346	145	<i>Alnus glutinosa</i>	autumn
	Sotatxi-F	S34	20	10.1	8.1	330	1100.00	59.00	43.14980	-2.85010	125	<i>Alnus glutinosa</i>	autumn
<b>France</b>													
Lecerf & Chauvet, 2008	Tescou	F1	20	6.5	8.2	564	3256.00	6.3	43.91139	1.76250	180	<i>Alnus glutinosa</i>	autumn/winter
	Tauge	F2	17	7.4	8.0	648	3545.00	100.7	44.05194	1.44528	98	<i>Alnus glutinosa</i>	autumn/winter
	Linon	F3	21	8.3	8.2	170	2542.00	23.5	43.34167	2.23167	369	<i>Alnus glutinosa</i>	autumn/winter
	Gresillou	F4	8	11.8	8.3	575	1476.00	20.7	43.33389	2.37667	210	<i>Alnus glutinosa</i>	autumn/winter
	Fraissegne	F5	26	7.0	6.5	41	1160.00	3.1	43.41222	2.23361	800	<i>Alnus glutinosa</i>	autumn/winter
	Linon	F6	26	8.1	6.7	75	395.00	4.0	43.41333	2.25639	710	<i>Alnus glutinosa</i>	autumn/winter
Duarte <i>et al.</i> , 2009	Seye	F7	13	9.4	8.0	628	5500.00	6.00	44.25111	1.86694	290	<i>Alnus glutinosa</i>	autumn/winter
	Tescou	F8	13	8.5	8.0	604	1900.00	5.00	43.91139	1.76250	180	<i>Alnus glutinosa</i>	autumn/winter
	Lére	F9	15	9.9	7.8	614	3400.00	31.00	44.15417	1.52472	107	<i>Alnus glutinosa</i>	autumn/winter
	Lupte	F10	15	9.7	7.9	667	4300.00	76.00	44.25944	1.36333	128	<i>Alnus glutinosa</i>	autumn/winter
	Tauge	F11	13	9.0	7.7	722	3200.00	300.00	44.05194	1.44528	98	<i>Alnus glutinosa</i>	autumn/winter
<b>Germany</b>													
Solé <i>et al.</i> , 2008	H4	G1	6	6.8	7.5	5400	33634.31	61.89	51.54000	11.48000	205	<i>Alnus glutinosa</i>	spring
	H8	G2	7	9.6	8.3	2500	13995.49	26.06	51.54000	11.53000	48	<i>Alnus glutinosa</i>	spring
	H9	G3	11	16.1	7.4	1500	1805.87	55.37	51.49000	11.70000	102	<i>Alnus glutinosa</i>	spring
	UHH2	G4	7	9.6	7.0	1900	6997.74	68.40	51.52000	11.92000	78	<i>Alnus glutinosa</i>	spring
	UHH5	G5	9	15.0	8.2	1500	5643.34	48.86	51.50000	11.95000	85	<i>Alnus glutinosa</i>	spring
	UHH8	G6	12	13.7	8.5	1700	5869.07	52.12	51.44000	11.95000	108	<i>Alnus glutinosa</i>	spring
	UHH9	G7	13	14.7	7.8	1100	4966.14	45.60	51.43000	11.97000	89	<i>Alnus glutinosa</i>	spring
	SpWFL	G8	11	12.6	7.1	1800	1354.40	35.83	51.72000	12.29000	68	<i>Alnus glutinosa</i>	spring
<b>Panama</b>													
Bärlocher <i>et al.</i> , 2010	Rio Limbo-P1	Pa1	10	25.1	6.8	180	22.57	6.51	9.16342	-79.74728	78	mixed leaf species	wet season
	Rio Frijoles-P2	Pa2	15	25.6	7.3	140	22.57	19.54	9.15436	-79.73394	81	mixed leaf species	wet season
	Rio Frijolito-P3	Pa3	11	25.8	7.5	180	33.86	26.06	9.14978	-79.73095	73	mixed leaf species	wet season
	Rio Boqueron (tributary)-P4	Pa4	11	23.2	7.4	150	56.43	55.37	9.39128	-79.56043	131	mixed leaf species	wet season
	Rio La Puente-P5	Pa5	11	24.8	6.6	70	22.57	19.54	9.16689	-79.51842	147	mixed leaf species	wet season
	Rio Gatuncillo-R1	Pa6	4	26.3	7.2	160	22.57	65.15	9.31317	-79.62953	80	mixed leaf species	wet season
	Rio Palenque II-R2	Pa7	6	25.4	7.0	130	45.15	29.32	9.20838	-79.67995	69	mixed leaf species	wet season
	Rio Salamanca-R3	Pa8	6	24.9	7.4	170	45.15	71.66	9.34972	-79.59397	97	mixed leaf species	wet season
	Quebrada Sardinilla-R4	Pa9	11	24.7	7.2	230	79.01	123.78	9.30147	-79.64153	96	mixed leaf species	wet season
	Rio Chilibrillo-R5	Pa10	4	25.9	7.1	210	45.15	9.77	9.16100	-79.53822	115	mixed leaf species	wet season
	Quebrada Puerquera-U1	Pa11	6	25.7	7.5	370	22.57	39.09	9.27880	-79.69445	91	mixed leaf species	wet season
	Rio Duque-U2	Pa12	7	26.3	7.4	250	45.15	68.40	9.27147	-79.69848	85	mixed leaf species	wet season
	Quebrada Ancha-U3	Pa13	4	25.1	7.3	270	146.73	127.04	9.12931	-79.58264	120	mixed leaf species	wet season
	Rio Chilibre-U4	Pa14	11	24.6	6.9	140	146.73	130.29	9.10969	-79.57469	132	mixed leaf species	wet season
	Quebrada La Cabima-U5	Pa15	7	27.4	7.1	300	237.02	182.41	9.14158	-79.55439	132	mixed leaf species	wet season

**Table S2.** N° of occurrences and minimum and maximum contributions (%) of each aquatic hyphomycete species in the dataset. *N° de ocorrências e contribuições mínimas e máximas (%) de cada espécie de hifomiceto aquático no conjunto de dados.*

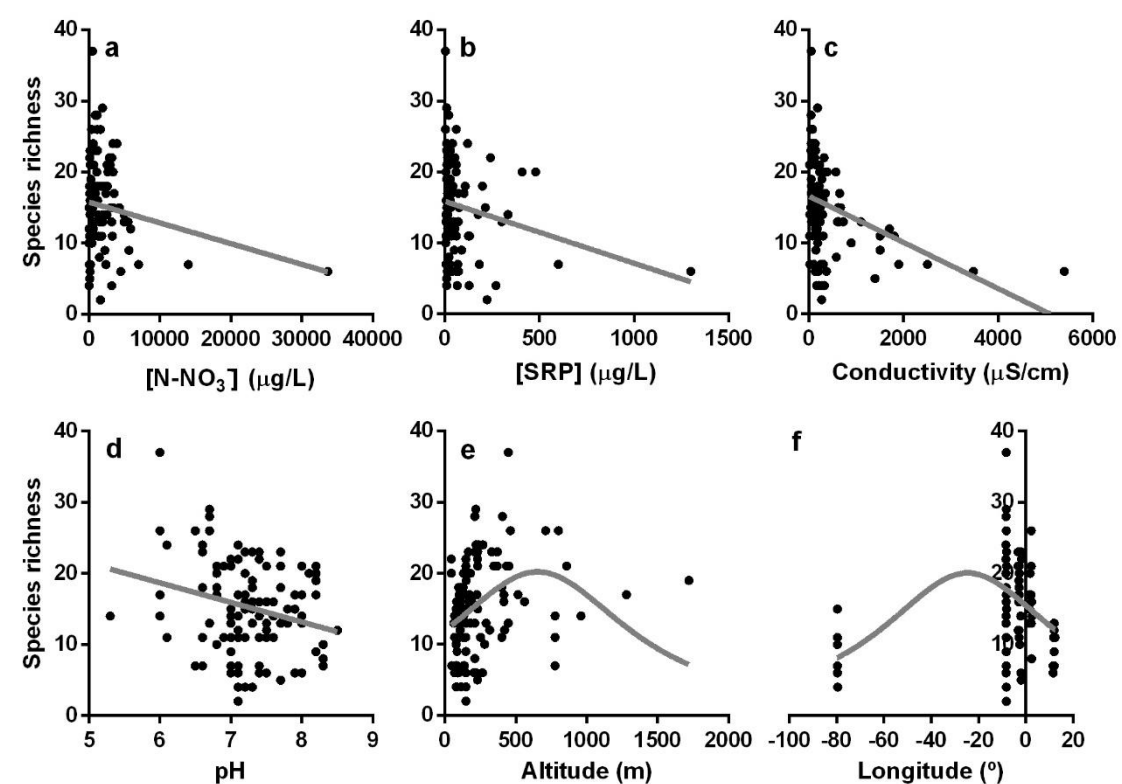
Species	Species acronym	N° of occurrences	Minimum	Maximum
<i>Alatospora acuminata</i> Ingold	AAC	78	0.1	62.7
<i>Alatospora flagellata</i> (J. Gönczöl) Marvanová	AFL	24	0.1	0.8
<i>Alatospora pulchella</i> Marvanová	AP	30	0.1	5.0
<i>Anguillospora crassa</i> Ingold	ACR	8	0.1	5.5
<i>Anguillospora filiformis</i> Greath.	AFI	77	0.1	82.3
<i>Anguillospora furtiva</i> Descals (J. Webster & Descals)	AFU	5	0.1	0.1
<i>Anguillospora longissima</i> (Sacc. & P. Syd.) Ingold	AL	44	0.1	46.7
<i>Anguillospora mediocris</i> J. Gönczöl & Marvanová	AM	2	15.8	32.0
<i>Anguillospora rosea</i> Descals (J. Webster & Descals)	AR	4	0.2	5.6
<i>Angulospora aquatica</i> Sv. Nilsson	AAQ	2	0.5	0.5
<i>Articulospora antipodea</i> A. Roldán & Honrubia ined.	AAN	1	0.3	0.3
<i>Articulospora tetracladia</i> Ingold	AT	66	0.0	68.9
<i>Campylospora chaetocladia</i> Ranzoni	CC	5	1.9	8.5
<i>Campylospora filicladia</i> Nawawi	CF	8	0.8	14.3
<i>Campylospora parvula</i> Kuzuha	CP	3	0.1	0.5
<i>Clavariopsis aquatica</i> De Wild.	CLA	65	0.1	37.8
<i>Clavatospora longibrachiata</i> (Ingold) Sv. Nilsson ex Marvanová & Sv. Nilsson	CL	54	0.1	52.0
<i>Clavatospora tentacula</i> Sv. Nilsson	CT	3	2.0	11.6
<i>Colispora elongata</i> Marvanová	CE	2	0.1	0.2
<i>Crucella subtilis</i> Marvanová & Suberkr.	CS	9	0.1	9.2
<i>Culicidospora aquatica</i> R.H. Petersen	CUA	11	0.1	0.9
<i>Culicidospora gravida</i> R.H. Petersen	CG	1	1.0	1.0
<i>Dendrospora erecta</i> Ingold	DE	1	7.8	7.8
<i>Dendrospora tenella</i> Descals & J. Webster	DT	1	0.1	0.1
<i>Dimorphospora foliicola</i> Tubaki	DF	28	0.2	97.4
<i>Enantioptera tetra-alata</i> Descals	ET	1	0.4	0.4
<i>Flabellospora acuminata</i> Descals	FA	5	0.1	32.4
<i>Flagellospora curta</i> J. Webster	FCU	19	0.3	38.4
<i>Flagellospora curvula</i> Ingold	FCV	76	0.1	98.3
<i>Flagellospora penicillioides</i> Ingold	FP	9	0.2	14.3
<i>Fontanospora eccentrica</i> (R.H. Petersen) Dyko	FE	2	0.2	1.9
<i>Fontanospora fusiramosa</i> Marvanová, Peter J. Fisher & Descals	FF	5	0.1	3.2
<i>Geniculospora grandis</i> Greath. ex Sv. Nilsson (Greath. ex Nolan)	GG	5	0.1	0.6
<i>Geniculospora inflata</i> (Ingold) Sv. Nilsson ex Marvanová & Sv. Nilsson	GI	3	0.1	0.1
<i>Goniopila monticola</i> (Dyko) Marvanová & Descals	GM	26	0.1	17.8
<i>Gyoerffyella oxalidis</i> Vanev	GO	1	0.1	0.1
<i>Heliscella stellata</i> (Ingold & V.J. Cox) Marvanová	HST	41	0.1	36.1

<i>Heliscina campanulata</i> Marvanová	HC	2	0.2	0.9
<i>Heliscus lugdunensis</i> Sacc. & Therry	HL	77	0.1	74.6
<i>Heliscus submersus</i> H.J. Huds.	HSU	11	0.2	24.2
<i>Heliscus tentaculus</i> Umphlett	HT	3	0.1	0.2
<i>Hydrometrospora symmetrica</i> J. Gönczöl & Révay	HSY	1	0.3	0.3
<i>Infundibura adhaerens</i> Nag Raj & W.B. Kendr.	IA	7	0.1	27.5
<i>Isthmotricladia britannica</i> Descals	IB	1	0.2	0.2
<i>Lateriramulosa uni-inflata</i> Matsush.	LU	1	0.1	0.1
<i>Lemonniera alabamensis</i> R.C. Sinclair & Morgan-Jones	LAL	4	0.1	4.0
<i>Lemonniera aquatica</i> De Wild.	LAQ	45	0.1	29.7
<i>Lemonniera centrosphaera</i> Marvanová	LCE	5	0.1	0.2
<i>Lemonniera cornuta</i> Ranzoni	LCO	8	0.1	0.5
<i>Lemonniera filiformis</i> R.H. Petersen ex Dyko	LF	2	0.7	1.0
<i>Lemonniera terrestris</i> Tubaki	LT	21	0.1	58.7
<i>Lunulospora curvula</i> Ingold	LCV	72	0.1	93.0
<i>Lunulospora cymbiformis</i> K. Miura	LCY	6	0.5	15.4
<i>Magdalaenaea monogramma</i> G. Arnaud	MM	1	1.0	1.0
<i>Mycocentrospora acerina</i> (R. Hartig) Deighton	MAC	4	0.2	2.0
<i>Mycocentrospora angulata</i> (R.H. Petersen) S.H. Iqbal	MAN	3	0.1	1.2
<i>Mycocentrospora aquatica</i> S.H. Iqbal	MAQ	2	3.0	3.8
<i>Mycofalcella calcarata</i> Marvanová, Om-Kalth. & J. Webster	MC	10	0.1	2.9
<i>Phalangispora constricta</i> Nawawi & J. Webster	PC	1	1.0	1.0
<i>Pleuropedium macrum</i> Marvanová & Bärl.	PMA	1	0.1	0.1
<i>Pleuropedium multiseptatum</i> Marvanová & Descals	PMU	1	0.2	0.2
<i>Pseudoanguillospora stricta</i> S.H. Iqbal	PS	1	0.8	0.8
<i>Pyramidospora fluminea</i> Miura & K.I. Kudo	PF	1	1.2	1.2
<i>Stenoclaadiella neglecta</i> (Marvanová & Descals) Marvanová & Descals	SN	27	0.1	19.7
<i>Symptodiocladium frondosum</i> Descals	SF	3	0.1	1.9
<i>Taeniospora descalsii</i> Marvanová & Stalpers	TD	2	0.1	0.4
<i>Taeniospora gracilis</i> Marvanová & Stalpers	TG	7	0.1	1.2
<i>Tetrachaetum elegans</i> Ingold	TE	71	0.1	54.8
<i>Tetracladium apiense</i> R.C. Sinclair & Eicker	TAP	4	1.0	18.0
<i>Tetracladium breve</i> A. Roldán	TB	2	0.1	0.9
<i>Tetracladium furcatum</i> Descals	TF	2	0.2	0.3
<i>Tetracladium marchalianum</i> De Wild.	TMA	53	0.1	85.4
<i>Tetracladium setigerum</i> (Grove) Ingold	TSE	11	0.1	0.7
<i>Tricellula aquatica</i> J. Webster	TAQ	2	0.1	0.2
<i>Tricellula aurantiaca</i> (Haskins) Arx	TAU	1	0.8	0.8
<i>Tricellula curvata</i> Haskins	TCU	1	0.1	0.1
<i>Trichocladium angelicum</i> A. Roldán & Honrubia	TF	3	0.1	0.1
<i>Tricladopsis flagelliformis</i> Descals	TAG	3	0.9	1.5
<i>Tricladium angulatum</i> Ingold	TAN	24	0.1	5.5
<i>Tricladium attenuatum</i> S.H. Iqbal	TAT	8	0.1	0.8
<i>Tricladium chaetocladium</i> Ingold	TCH	62	0.1	22.9

<i>Tricladium curvisporum</i> Descals	TCU	2	0.2	1.0
<i>Tricladium minutum</i> (S.H. Iqbal) Marvanová & Descals	TMI	1	0.1	0.1
<i>Tricladium patulum</i> Marvanová	TPA	4	0.1	0.1
<i>Tricladium splendens</i> Ingold	TS	29	0.1	1.8
<i>Tricladium terrestre</i> D. Park	TT	3	0.2	0.4
<i>Tricladium varium</i> E.B.G. Jones & R.J. Stewart	TV	1	0.1	0.1
<i>Triperspermum camelopardus</i> Ingold, Dann & P.J. McDougall	TCA	3	0.2	0.5
<i>Triperspermum myrti</i> (Lind) S. Hughes	TMY	6	0.5	3.5
<i>Triperspermum prolongatum</i> R.C. Sinclair & Morgan-Jones	TPR	1	2.8	2.8
<i>Triscelophorus acuminatus</i> Nawawi	TAC	25	0.1	89.5
<i>Triscelophorus monosporus</i> Ingold	TMO	16	0.1	3.9
<i>Tumularia aquatica</i> (Ingold) Descals & Marvanová	TAQ	6	0.1	0.5
<i>Tumularia tuberculata</i> (J. Gönczöl) Descals & Marvanová	TT	1	0.2	0.2
<i>Varicosporium elodeae</i> W. Kegel	VE	16	0.1	7.6
<i>Ypsilina graminea</i> (Ingold, P.J. McDougall & Dann) Descals, J. Webster & Marvanová	YG	2	0.5	0.8

**Table S3.** Models applied to assess the effects of each variable on aquatic hyphomycete species richness ( $\alpha$ -diversity) (figure 3 and figure S1). Linear regression model:  $y = \text{slope} * x + y_0$ ; Lorentzian model:  $y = \text{Amplitude} / [1 + ((x - \text{Centre}) / \text{Width})^2]$ . *Modelos aplicados para aceder os efeitos de cada variável na riqueza em espécies de hifomicetos aquáticos (diversidade alfa) (figura 3 e figura S1). Modelo de regressão linear:  $y = \text{declive} * x + y_0$ ; modelo de Lorentzian:  $y = \text{Amplitude} / [1 + ((x - \text{Centro}) / \text{Largura})^2]$ .*

Variable	Model	r <sup>2</sup>	p	Equation
N-NO <sub>3</sub> <sup>-</sup> (µg/L)	Linear regression	0.03	0.09	$y = -0.00029 * x + 15.77$
SRP (µg/L)	Linear regression	0.04	0.03	$y = -0.0087 * x + 15.87$
Conductivity (µS/cm)	Linear regression	0.14	<0.0001	$y = -0.0032 * x + 16.57$
pH	Linear regression	0.06	0.009	$y = -2.75 * x + 35.18$
Temperature (°C)	Lorentzian	0.20	<0.0001	$y = 17.08 / [1 + ((x - 9.57) / 15.15)^2]$
Latitude (°)	Lorentzian	0.22	<0.0001	$y = 17.13 / [1 + ((x - 38.20) / 25.11)^2]$
Longitude (°)	Lorentzian	0.24	<0.0001	$y = 20.05 / [1 + ((x + 24.69) / 45.50)^2]$
Altitude (m)	Lorentzian	0.10	<0.0001	$y = 20.21 / [1 + ((x - 653.7) / 789.5)^2]$
PC1 scores	Lorentzian	0.24	<0.0001	$y = 17.62 / [1 + ((x + 0.22) / 3.54)^2]$
PC2 scores	Linear regression	0.25	<0.0001	$y = -2.42 * x + 15.23$



**Figure S1.** Relationship between  $\alpha$ -diversity and the environmental variables  $\text{N-NO}_3^-$  (a), SRP (b), conductivity (c) and pH (d) and the spatial factors altitude (e) and longitude (f). Linear regression models gave the best fits for the relationship between  $\alpha$ -diversity and  $\text{N-NO}_3^-$ , SRP, conductivity and pH, while non-linear regression models (Lorentzian model) gave the best fits for the relationship between  $\alpha$ -diversity and altitude and longitude. See Table S3 for more details about the regressions. *Relação entre a diversidade alfa e as variáveis ambientais  $\text{N-NO}_3^-$  (a), SRP (b), condutividade (c) e pH (d) e os fatores espaciais altitude (e) e longitude (f). O melhor ajuste de pontos para as relações entre a diversidade alfa e as concentrações de  $\text{N-NO}_3^-$  e SRP, a condutividade e o pH, foi obtido usando modelos de regressão linear, enquanto para as relações entre a diversidade alfa e a altitude e a longitude foi obtido usando modelos de regressão não linear (modelo de Lorentzian). Consultar a Tabela S3 para mais detalhes sobre as regressões.*